

SEQUENCE LISTING

<110> Her Majesty the Queen in Right of Canada as represented by the Minister of Agriculture and Agri-Food Canada

<120> A Repressor-Mediated Regulation System for Control of Gene Expression in Plants

<130> 08-890984WO

<150> US 60/292,973

<151> 2001-05-23

<160> 44

<170> PatentIn version 3.0

<210> 1

<211> 429

<212> DNA

<213> Agrobacterium radiobacter

<400> 1

atgacggaaa ctgcatacgg taacgcccag gatctgctgg tcgaactgac ggcggatatt	60
gtggetgcct atgtagcaa ccacgtcgtt ceggttaactg agcttcccgg ccttatttcg	120
gatgttcata cggcactcag cggaacatcg gcaccggcat cggtggcgggt caatggtgaa	180
aagcagaagc ctgctgtgtc gggtcgcaag tcgggttcagg acgatcatat cgtctgtttg	240
gaatgtggtg gctcgttcaa gtcgtcaaa cgccacctga cgacgcata cagcatgacg	300
ccggaagaat atcgcgaaaa atgggatctg cgggtcgatt atccgatggt tgctcccgcc	360
tatgccgaag cccgttcgcg gtcgccaag gaaatgggtc tcggtcagcg ccgcaaggcg	420
aaccgttga	429

<210> 2

<211> 458

<212> DNA

<213> synthetic

<400> 2
 atgactgaga ctgcttacgg taacgctcag gatcttcttg ttgagcttac tgctgatata 60
 gttgctgctt acgtttctaa ccacgttggt cctgttactg agcttcctgg acttatctct 120
 gatgttcata ctgcactttc tggaacatct gctcctgctt ctgttgctgt taacgttgag 180
 aagcagaagc ctgctgtttc tgttcgtaag tctgttcagg atgatcatat cgtttgcttg 240
 gagtgtggtg gttctttcaa gtctctcaag cgtcacctta ctactcatca ctctatgact 300
 ccagaggagt atagagagaa gtgggatctt cctgttgatt accctatggt tgctcctgct 360
 tacgctgagg ctcggtctcg tctcgctaag gagatgggtc tcggtcagcg tcgtaaggct 420
 aaccgtccaa aaaagaagcg taaggctctga gagctcgc 458

<210> 3

<211> 447

<212> DNA

<213> synthetic

<220>

<221> misc_feature

<222> (1)..(447)

<223> n is A or T or G or C

<220>

<221> misc_feature

<222> (1)..(447)

<223> h is a or c or t/u

<220>

<221> misc_feature

<222> (1)..(447)

<223> m is a or c

<220>

<221> misc_feature

<222> (1)..(447)

<223> r is G or A

<220>

<221> misc_feature

<222> (1)..(447)

<223> y is t/u or c

<220>

<221> misc_feature

<222> (1)..(447)

<223> w is a or t/u

<400> 3

atgacngara cngcntaygg naaygcncar gayytnytng tngarytnac ngcngayath	60
gtngcngcnt aygtwnsnaa ycaygtngtn ccngtnacng arytnccngg nytnathwsn	120
gaygtncaya cngcnytnws nggnacnwsn gcnccngcnw sngtngcngt naaygtngar	180
aarcaraarc cngcngtnws ngtnmgnaar wsngtncarg aygaycayat hgtntggytn	240
gartgyggng gnwsnttyaa rwsnytnaar mgncayytna cnacncayca ywsnatgacn	300
ccngargart aymngarara rtgggayytn ccngtngayt ayccnatggt ngcncngcn	360
taygcngarg cnmgwnsmg nytngcnaar garatgggny tnggncarmg nmgnaaargcn	420
aaymgncna araaraarmg naargtn	447

<210> 4

<211> 27

<212> DNA

<213> synthetic

<220>

<221> misc_feature

<222> (60)..(447)

<223> where n is A or T or G or C

<400> 4
gcggatccga tgacggaaac tgcatac

27

<210> 5

<211> 25

<212> DNA

<213> synthetic

<400> 5
gcaagcttca acggttcgcc ttgcg

25

<210> 6

<211> 36

<212> DNA

<213> synthetic

<400> 6
tgcggatgca taagcttgct gacattgcta gaaaag

36

<210> 7

<211> 26

<212> DNA

<213> synthetic

<400> 7
cggggatcct ttcagggcca tttcag

26

<210> 8

<211> 25

<212> DNA

<213> synthetic

<400> 8
tatatttcaa ttttattgta atata

25

<210> 9
<211> 109
<212> DNA
<213> synthetic

<400> 9
atctccactg acgtaaggga tgacgcacaa tccactatc cttcgcaaga cccttctct 60
atataatata tttcaatttt attgtaatat aacacggggg actctagag 109

<210> 10
<211> 113
<212> DNA
<213> synthetic

<400> 10
gatcctctag agtcccccggt gttatattac aataaaattg aaatatatta tatagaggaa 60
gggtcttgcg aaggatagtg ggattgtgcg tcatccctta cgtcagtgga gat 113

<210> 11
<211> 107
<212> DNA
<213> synthetic

<400> 11
atctccactg acgtaaggga tgacgcacaa tctatatttc aattttattg taatatacta 60
tataaggaag ttcatttcat ttggagagaa cacggggggac tctagag 107

<210> 12
<211> 111
<212> DNA
<213> synthetic

<400> 12
gatcctctag agtcccccggt gttctctcca aatgaaatga acttccttat atagtatatt 60

acaataaaat tgaaatatag attgtgcgtc atcccttacg tcagtggaga t 111

<210> 13

<211> 108

<212> DNA

<213> synthetic

<400> 13

atctccactg acgtaaggga tgacgcacaa tctatatttc aattttattg taatatacta 60

tataatatat ttcaatttta ttgtaatata acacggggga ctctagag 108

<210> 14

<211> 112

<212> DNA

<213> synthetic

<400> 14

gacctctag agtccccctg gttatattac aataaaattg aaatatatta tatagtatat 60

tacaataaaa ttgaaatata gattgtgcgt catcccttac gtcagtggag at 112

<210> 15

<211> 59

<212> DNA

<213> synthetic

<400> 15

gacctatat ttcaatttta ttgtaatata gctatatttc aattttattg taatataat 59

<210> 16

<211> 57

<212> DNA

<213> synthetic

<400> 16

cgattatatt acaataaaat tgaaatatag ctatattaca ataaaattga aatatag 57

<210> 17

<211> 24

<212> DNA

<213> synthetic

<400> 17

aagcttatgt atgcaagagt cagc

24

<210> 18

<211> 24

<212> DNA

<213> synthetic

<400> 18

ttgactagta tcagcctcag ccat

24

<210> 19

<211> 27

<212> DNA

<213> synthetic

<400> 19

tataattaaa atattaactg tcgcatt

27

<210> 20

<211> 9

<212> DNA

<213> synthetic

<400> 20

watdhwkma

9

<210> 21

<211> 104

<212> PRT

<213> Agrobacterium radiobacter

<400> 21

Met Thr Thr Ala Tyr Gly Asn Ala Asp Val Thr Ala Asp Val Ala Ala
1 5 10 15
Tyr Val Ser Asn His Val Val Val Thr Gly Ser Asp Val His Thr Ala
20 25 30
Ser Gly Thr Ser Ala Ala Ser Val Ala Val Asn Val Lys Lys Ala Val
35 40 45
Ser Val Arg Lys Ser Val Asp Asp His Val Cys Cys Gly Gly Ser Lys
50 55 60
Ser Lys Arg His Thr Thr His His Ser Met Thr Tyr Arg Lys Trp Asp
65 70 75 80
Val Asp Tyr Met Val Ala Ala Tyr Ala Ala Arg Ser Arg Ala Lys Met
85 90 95
Gly Gly Arg Arg Lys Ala Asn Arg
100

<210> 22

<211> 138

<212> DNA

<213> synthetic

<400> 22

gatatctcca ctgacgtaag ggatgacgca caatcccact atccttcgca agacccttcc 60
tctatataat atatttcaat tttattgtaa tataacacgg gggactctag aggatccccg 120
gggtggtcagt cccttatg 138

<210> 23

<211> 136

<212> DNA

<213> synthetic

<400> 23

gatatctcca ctgacgtaag ggatgacgca caatctatat ttcaatttta ttgtaatata 60
ctatataagg aagttcattt catttggaga gaacacgggg gactctagag gatccccggg 120
tggtcagtc cttatg 136

<210> 24

<211> 137

<212> DNA

<213> synthetic

<400> 24

gatatctcca ctgacgtaag ggatgacgca caatctatat ttcaatttta ttgtaatata 60
ctatataata tatttcaatt ttattgtaat ataacacggg ggactctaga ggatccccgg 120
gtggtcagtc ccttatg 137

<210> 25

<211> 237

<212> DNA

<213> synthetic

<400> 25

gatatctcca ctgacgtaag ggatgacgca caatcccact atccttcgca agacccttcc 60
tctatataat atatttcaat tttattgtaa tataacacgg gggactctag aggatcctat 120
atttcaattt tattgtaata tagctatatt tcaattttat tgtaatataa tcgatttcga 180
accgggggta ccgaattcct cgagtctaga ggatccccgg gtggtcagtc ccttatg 237

<210> 26

<211> 142

<212> PRT

<213> agrobacterium

<400> 26

Met Thr Glu Thr Ala Tyr Gly Asn Ala Gln Asp Leu Leu Val Glu Leu
1 5 10 15
Thr Ala Asp Ile Val Ala Ala Tyr Val Ser Asn His Val Val Pro Val
20 25 30
Thr Glu Leu Pro Gly Leu Ile Ser Asp Val His Thr Ala Leu Ser Gly
35 40 45
Thr Ser Ala Pro Ala Ser Val Ala Val Asn Val Glu Lys Gln Lys Pro
50 55 60

Ala Val Ser Val Arg Lys Ser Val Gln Asp Asp His Ile Val Cys Leu
65 70 75 80
Glu Cys Gly Gly Ser Phe Lys Ser Leu Lys Arg His Leu Thr Thr His
85 90 95
His Ser Met Thr Pro Glu Glu Tyr Arg Glu Lys Trp Asp Leu Pro Val
100 105 110
Asp Tyr Pro Met Val Ala Pro Ala Tyr Ala Glu Ala Arg Ser Arg Leu
115 120 125
Ala Lys Glu Met Gly Leu Gly Gln Arg Arg Lys Ala Asn Arg
130 135 140

<210> 27

<211> 149

<212> PRT

<213> synthetic

<400> 27

Met Thr Glu Thr Ala Tyr Gly Asn Ala Gln Asp Leu Leu Val Glu Leu
1 5 10 15
Thr Ala Asp Ile Val Ala Ala Tyr Val Ser Asn His Val Val Pro Val
20 25 30
Thr Glu Leu Pro Gly Leu Ile Ser Asp Val His Thr Ala Leu Ser Gly
35 40 45
Thr Ser Ala Pro Ala Ser Val Ala Val Asn Val Glu Lys Gln Lys Pro
50 55 60
Ala Val Ser Val Arg Lys Ser Val Gln Asp Asp His Ile Val Cys Leu
65 70 75 80
Glu Cys Gly Gly Ser Phe Lys Ser Leu Lys Arg His Leu Thr Thr His
85 90 95
His Ser Met Thr Pro Glu Glu Tyr Arg Glu Lys Trp Asp Leu Pro Val
100 105 110
Asp Tyr Pro Met Val Ala Pro Ala Tyr Ala Glu Ala Arg Ser Arg Leu
115 120 125
Ala Lys Glu Met Gly Leu Gly Gln Arg Arg Lys Ala Asn Arg Pro Lys
130 135 140
Lys Lys Arg Lys Val
145

<210> 28

<211> 143

<212> PRT

<213> rhizobium elti

<400> 28

Met Thr Asp Met Ala Thr Gly Asn Ala Pro Glu Leu Leu Val Glu Leu
1 5 10 15
Thr Ala Asp Ile Val Ala Ala Tyr Val Ser Asn His Val Val Pro Val
20 25 30
Ser Asp Leu Ala Asn Leu Ile Ser Asp Val His Ser Ala Leu Ser Asn
35 40 45
Thr Ser Val Pro Gln Pro Ala Ala Ala Val Val Glu Lys Gln Lys Pro
50 55 60
Ala Val Ser Val Arg Lys Ser Val Gln Asp Glu Gln Ile Thr Cys Leu
65 70 75 80
Glu Cys Gly Gly Asn Phe Lys Ser Leu Lys Arg His Leu Met Thr His
85 90 95
His Ser Leu Ser Pro Glu Glu Tyr Arg Glu Lys Trp Asp Leu Pro Thr
100 105 110
Asp Tyr Pro Met Val Ala Pro Ala Tyr Ala Glu Ala Arg Ser Arg Leu
115 120 125
Ala Lys Glu Met Gly Leu Gly Gln Arg Arg Lys Arg Gly Arg Gly
130 135 140

<210> 29

<211> 142

<212> PRT

<213> agrobacterium radiobacter

<400> 29

Met Thr Glu Thr Ala Tyr Gly Asn Ala Gln Asp Leu Leu Val Glu Leu
1 5 10 15
Thr Ala Asp Ile Val Ala Ala Tyr Val Ser Asn His Val Val Pro Val
20 25 30
Thr Glu Leu Pro Gly Leu Ile Ser Asp Val His Thr Ala Leu Ser Gly
35 40 45
Thr Ser Ala Pro Ala Ser Val Ala Val Asn Val Glu Lys Gln Lys Pro
50 55 60
Ala Val Ser Val Arg Lys Ser Val Gln Asp Asp His Ile Val Cys Leu
65 70 75 80
Glu Cys Gly Gly Ser Phe Lys Ser Leu Lys Arg His Leu Thr Thr His
85 90 95

His Ser Met Thr Pro Glu Glu Tyr Arg Glu Lys Trp Asp Leu Gln Val
 100 105 110

Asp Tyr Pro Met Val Ala Pro Ala Tyr Ala Glu Ala Arg Ser Arg Leu
 115 120 125

Ala Lys Glu Met Gly Leu Gly Gln Arg Arg Lys Ala Asn Arg
 130 135 140

<210> 30

<211> 143

<212> PRT

<213> rhizobium meliloti

<400> 30

Met Thr Glu Thr Ser Leu Gly Thr Ser Asn Glu Leu Leu Val Glu Leu
 1 5 10 15

Thr Ala Glu Ile Val Ala Ala Tyr Val Ser Asn His Val Val Pro Val
 20 25 30

Ala Glu Leu Pro Thr Leu Ile Ala Asp Val His Ser Ala Leu Asn Asn
 35 40 45

Thr Thr Ala Pro Ala Pro Val Val Val Pro Val Glu Lys Pro Lys Pro
 50 55 60

Ala Val Ser Val Arg Lys Ser Val Gln Asp Asp Gln Ile Thr Cys Leu
 65 70 75 80

Glu Cys Gly Gly Thr Phe Lys Ser Leu Lys Arg His Leu Met Thr His
 85 90 95

His Asn Leu Ser Pro Glu Glu Tyr Arg Asp Lys Trp Asp Leu Pro Ala
 100 105 110

Asp Tyr Pro Met Val Ala Pro Ala Tyr Ala Glu Ala Arg Ser Arg Leu
 115 120 125

Ala Lys Glu Met Gly Leu Gly Gln Arg Arg Lys Arg Arg Gly Lys
 130 135 140

<210> 31

<211> 16

<212> PRT

<213> arabidopsis

<400> 31

Arg Ile Glu Asn Thr Thr Asn Arg Gln Val Thr Phe Cys Lys Arg Arg
 1 5 10 15

<210> 32

<211> 18

<212> PRT

<213> tobacco

<400> 32

Arg Arg Leu Ala Gln Asn Arg Glu Ala Ala Arg Lys Ser Arg Leu Arg
1 5 10 15

Lys Lys

<210> 33

<211> 21

<212> PRT

<213> tobacco

<400> 33

Lys Lys Arg Ala Arg Leu Val Arg Asn Arg Glu Ser Ala Gln Leu Ser
1 5 10 15

Arg Gln Arg Lys Lys
20

<210> 34

<211> 18

<212> PRT

<213> mouse

<400> 34

Arg Lys Arg Lys Glu Ser Asn Arg Glu Ser Ala Arg Arg Ser Arg Tyr
1 5 10 15

Arg Lys

<210> 35

<211> 47

<212> PRT

<213> potyvirus

<220>

<221> x

<222> (12)..(44)

<223> unknown or other amino acid

<400> 35

Lys Lys Asn Gln Lys His Lys Leu Lys Ala Ala Met Xaa Xaa Xaa Xaa
1 5 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
20 25 30

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Lys Arg Lys
35 40 45

<210> 36

<211> 17

<212> PRT

<213> xenopus

<400> 36

Lys Arg Pro Ala Ala Thr Lys Lys Ala Gly Gln Ala Lys Lys Lys Lys
1 5 10 15

Leu

<210> 37

<211> 17

<212> PRT

<213> xenopus

<400> 37

Lys Arg Ile Ala Pro Asp Ser Ala Ser Lys Val Pro Arg Lys Lys Thr
1 5 10 15

Arg

<210> 38

<211> 17

<212> PRT

<213> xenopus

<400> 38

Lys Arg Lys Thr Glu Glu Ser Pro Leu Lys Asp Lys Asp Ala Lys
1 5 10 15

Lys

<210> 39

<211> 17

<212> PRT

<213> mouse

<400> 39

Arg Lys Cys Leu Gln Ala Gly Met Asn Leu Glu Ala Arg Lys Thr Lys
1 5 10 15

Lys

<210> 40

<211> 17

<212> PRT

<213> human

<400> 40

Arg Lys Cys Leu Gln Ala Gly Met Asn Leu Glu Ala Arg Lys Thr Lys
1 5 10 15

Lys

<210> 41

<211> 17

<212> PRT

<213> human

<400> 41

Arg Lys Cys Leu Gln Ala Gly Met Asn Leu Glu Ala Arg Lys Thr Lys
1 5 10 15

Lys

<210> 42

<211> 17

<212> PRT

<213> chicken

<400> 42

Arg Lys Cys Cys Gln Ala Gly Met Val Leu Gly Gly Arg Lys Phe Lys
1 5 10 15

Lys

<210> 43

<211> 17

<212> PRT

<213> human

<400> 43

Arg Lys Cys Tyr Glu Ala Gly Met Thr Leu Gly Ala Arg Lys Leu Lys
1 5 10 15

Lys

<210> 44

<211> 17

<212> PRT

<213> chicken

<400> 44

Arg Arg Cys Phe Glu Val Arg Val Cys Ala Cys Pro Gly Arg Asp Arg
1 5 10 15

Lys